SWBAT

evaluate free body diagrams and become prepared to do the project

Sep 4-7:31 AM

Welcome!!!

SECA CP Physics
Friday 19 February 2016

PEDs with Passing

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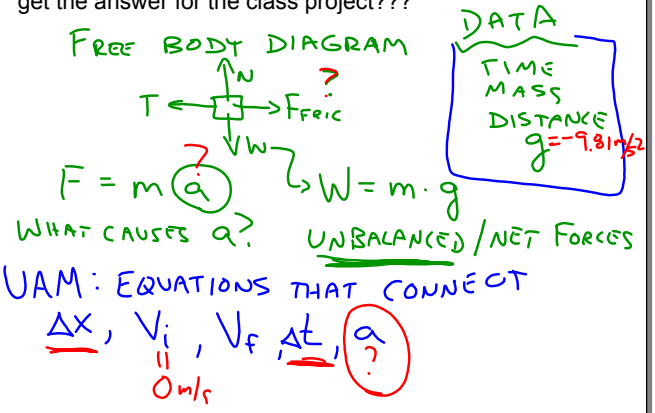
Room C-244

Centering (circle)

- Show me SchoolView if you want phone in class...
- PhET Forces in 1d (also attach to pg 62)
- Hmwk: START THE PROJECT ROUGH DRAFT!!!!!

Opening Activity: "WHAT'S THE FRICTION FORCE?"

What are the big physics ideas we need to get the answer for the class project???



Free Body Diagram - worksheet carousel

CLASS SOLUTIONS (day 2)

Circle: spirit week ideas, 0-5 how confident are you about getting going on project?

Sep 7-7:04 AM

What we should have solid:

Memorize our ~~5~~ 8 vocab cards, units, vector or not, definition, formula

Be able to answer distance vs displacement questions

Be able to make measurements of real-life motion. Know what is likely to make timing things difficult and how to get more reliable timing results

Be able to convert between miles and meters, between hours, minutes, and seconds

Be able to calculate speed = dist/time and velocity = disp/time

Know what all of the symbols in the UAM equations stand for and mean

Be able to turn a UAM word problem into a list of knowns and unknowns

Be able to pick the equation with those 4 things in it

Be able to put the knowns into that equation

(Be able to solve for the unknown)

→ PROJECTILES: V_x IS CONSTANT; V_y CHANGES $a_y = -9.8 m/s^2$ PG 42

PG 43 TIME, Δt, CONNECTS X & y

PG 49 VECTORS INTO X & y, ADD VECTORS

SOH -CAH -TOA

PG 59 DIFFERENCE BETWEEN MASS & WEIGHT

PG 61 NET FORCE

PG 63 FREE BODY DIAGRAMS

$F = m \cdot a$

QW every day to review - gather responses to front board.

Dec 4-9:15 AM

InteractiveNotebook - Table of Contents

Unit_____ Chapters_____ Date_____

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PR: DISTANCE & DISPLACEMENT	8	HMWK: FP DISPLACEMENT	9
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Sep 5-9:09 AM

FRICTION PROJECT CHALLENGE

IF BY (MON 2/29)

- ALL PEOPLE W/ 2+ DAYS ATTENDANCE PER WEEK
- GET >60% (PASSING) BASED ON PROJECT RUBRIC

THEN CLASS PIZZA PARTY @ LUNCH TIME ($2/PERSON)

Feb 12-10:02 AM

PG 65 FINDING FRICTION ON CAR

Things we know:

$F = m \cdot a$

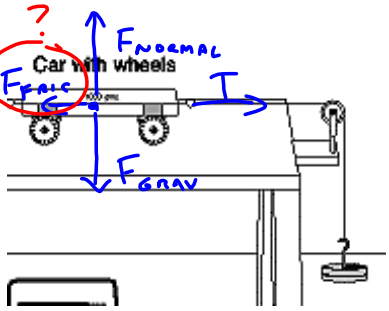
$F_{grav} = W = m * a_g$

Puller m = 50 g $\times \frac{1\ kg}{1000\ g} = .050\ kg$

Chunk m = 1000g = 1 kg

Cart m = 101.6g

$F_{GRAV} = (m_{CAR} + m_{CHUNK}) \cdot (-9.8\ m/s^2)$



Measure:

- distance on table
- time to travel from rest → a = ?

NEWTON'S 1ST LAW:

- OBJECTS KEEP DOING WHAT THEY WERE DOING UNLESS THERE IS A NET FORCE
  - MAKES CAR ACCELERATE

Feb 11-10:19 AM

PG 64-65

What do we want to know about the motion of our cart? How can we get the best possible answer?

(Blue = thoughts before measruing)

- STOP WATCHER = LET CAR GO?
- [SloPro INSTEAD] x2?
- AS MUCH DISTANCE AS POSSIBLE
- LIGHTEST MASS THAT accelerates 30g
- MAKE SURE CART IS STRAIGHT

(black = thoughts while measuring)

- MARKED BEGINNING WITH TAPE, BUT IT ADDED FRICTION & CART DIDN'T MOVE, SO MOVED TAPE OVER
- HARD TO TOUCH/STOP CART EXACTLY AT BACK END

TRIAL 1: 76 cm, 20g
$t_1 = 2.9$ s $t_2 = 9.4$ s

TRIAL 2: 76 cm, 20g
$t_1 = 3.3$ sec $t_2 = 8.7$ s

WHY NOT THE SAME?
(9.4-2.9)= $\Delta t = 6.5$ s
(8.7-3.3)= $\Delta t = 5.4$ s

TRIAL 3: 69.7 cm, 30g
$t_1 = 3.3$ s $t_2 = 7.8$ s $\Delta t =$

TRIAL 4: 69.7 cm, 30g
$t_1 = 3.9$ s $t_2 = 7.7$ s $\Delta t =$

Feb 18-8:03 AM